

ABSTRACT OF THE DISCLOSURE

A propulsion system including an extinguishable rocket motor and an incorporated maneuver control system. The rocket motor may be of the solid fuel type. One or more proportional axial thrust valves in communication with a pressure vessel or motor case containing a solid fuel propellant may be used to release combustion products for creating axial thrust. A plurality of proportional maneuver control valves in communication with the pressure vessel and having associated maneuver control thrusters may be selectively actuated in different modes of operation to provide control of pitch, yaw and roll. Fully opening all valves in communication with the pressure vessel may be used to cause rapid depressurization to extinguish the propellant. Reignition of the rocket motor may be effected upon repressurization of the pressure vessel through closing at least some of the valves. Ignition grains may be employed to shorten reignition time, and multiple propellant grains may be provided for multiple pulses.

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